

## **CLAIMS**

What is claimed is:

1           1. A system for tracking a data transfer transaction across a multi-hop  
2 network, comprising:  
3                 a plurality of devices that conduct a data transfer transaction having at least  
4 one transfer segment across the multi-hop network, the plurality of devices including an  
5 origination device and a destination device;  
6                 a service device in communication with the plurality of devices, the service  
7 device generating a globally unique transaction identifier associated with the data transfer  
8 transaction; and  
9                 a tracking table maintained in the service device to track the data transfer  
10 transaction from the origination device to the destination device, the tracking table being  
11 associated with the globally unique transaction identifier.

1           2. The system of claim 1, further comprising:  
2                 a session identifier associated with each of the plurality of devices;  
3                 a job identifier associated with the segment transfer, the job identifier being  
4 generated by the respective one of the plurality of devices that conducts the segment  
5 transfer.

1           3.       The system of claim 1, wherein the service device transmits the globally  
2       unique transaction identifier to a respective one of the plurality of devices upon receiving a  
3       job identifier generated by the respective one of the plurality of devices.

1           4.       The system of claim 3, wherein the plurality of devices each transmit an  
2       associated session identifier, a new job identifier, and the globally unique transaction  
3       identifier to the service device upon conducting the segment transfer to facilitate tracking of  
4       the segment transfer by the service device.

1           5.       The system of claim 4, wherein the service device tracks the data transfer  
2       transaction by drawing an association between a first transaction identifier received from the  
3       plurality of devices and a second transaction identifier associated with the tracking table, the  
4       service device storing the respective session identifier and the new job identifier in the  
5       tracking table.

1           6.       A method for tracking a data transfer transaction across a multi-hop  
2       network, comprising the steps of:  
3                     conducting a data transfer transaction among a plurality of devices in the  
4       multi-hop network, the data transfer segment having at least one transfer segment across the  
5       multi-hop network, the plurality of devices including an origination device and a destination  
6       device;

7 generating a globally unique transaction identifier associated with the data  
8 transfer transaction in a service device, the service device being in communication with the  
9 plurality of devices; and  
10 maintaining a tracking table in the service device to track the data transfer  
11 transaction from the origination device to the destination device, the tracking table being  
12 associated with the globally unique transaction identifier.

1 7. The method of claim 6, further comprising the steps of:  
2 associating a session identifier with each of the plurality of devices;  
3 associating a job identifier with the segment transfer, the job identifier being  
4 generated by the respective one of the plurality of devices that conducts the segment  
5 transfer.

1 8. The method of claim 6, further comprising the step of transmitting the  
2 globally unique transaction identifier from the service device to a respective one of the  
3 plurality of devices upon receiving a job identifier generated by the respective one of the  
4 plurality of devices.

1 9. The method of claim 8, further comprising the step of transmitting an  
2 associated session identifier, a new job identifier, and the globally unique transaction  
3 identifier from the plurality of devices to the service device upon conducting the segment  
4 transfer to facilitate tracking of the segment transfer by the service device.

1           10.     The method of claim 9, further comprising the step of tracking the data  
2       transfer transaction in the service device by drawing an association between a first  
3       transaction identifier received from the plurality of devices and a second transaction identifier  
4       associated with the tracking table, the service device storing the respective session identifier  
5       and the new job identifier in the tracking table.

1           11.     A system for tracking a data transfer transaction across a multi-hop  
2       network, comprising:  
3               means for conducting a data transfer transaction among a plurality of devices  
4       in the multi-hop network, the data transfer segment having at least one transfer segment  
5       across the multi-hop network, the plurality of devices including an origination device and a  
6       destination device;  
7               means for generating a globally unique transaction identifier associated with  
8       the data transfer transaction in a service device, the service device being in communication  
9       with the plurality of devices; and  
10          means for maintaining a tracking table in the service device to track the data  
11       transfer transaction from the origination device to the destination device, the tracking table  
12       being associated with the globally unique transaction identifier.

1           12.     The system of claim 11, further comprising:  
2               means for associating a session identifier with each of the plurality of  
3       devices;

4 means for associating a job identifier with the segment transfer, the job  
5 identifier being generated by a respective one of the plurality of devices that conducts the  
6 segment transfer.

1           13.     The system of claim 11, further comprising means for transmitting the  
2 globally unique transaction identifier from the service device to a respective one of the  
3 plurality of devices upon receiving a job identifier generated by the respective one of the  
4 plurality of devices.

1           14.     The system of claim 13, further comprising means for transmitting an  
2 associated session identifier, a new job identifier, and the globally unique transaction  
3 identifier from the plurality of devices to the service device upon conducting the segment  
4 transfer to facilitate tracking of the segment transfer by the service device.

1           15.     The system of claim 14, further comprising means for tracking the data  
2 transfer transaction in the service device by drawing an association between a first  
3 transaction identifier received from the plurality of devices and a second transaction identifier  
4 associated with the tracking table, the service device storing the respective session identifier  
5 and the new job identifier in the tracking table.